

WHAT IS CLAIMED:

1. A method of removing substantially all of the volatile component in a green, volatile-containing gel-cast ceramic article cast from a gel-casting slurry, the method comprising the steps of:

- (a) providing the gel-casting slurry;
- (b) casting the article from the gel-casting slurry in a mold;
- (c) gelling the gel-casting slurry to form the gel-cast ceramic article in the mold;
- (d) releasing the gel-cast ceramic article from the mold;
- (e) freezing the gel-cast ceramic article after releasing the gel-cast ceramic article from the mold; and
- (f) subjecting the frozen gel-cast ceramic article to a vacuum for a sufficient time to freeze-dry the gel-cast ceramic article.

2. The method of claim 1, wherein the volatile component in the green ceramic article is selected from the group consisting of water, an organic solution, or a mixture of water and an organic solution.

3. The method of claim 1, wherein the volatile component comprises at least one material selected from the group consisting of water, cyclohexane, tert-butyl alcohol, and mixtures which include at least one of these materials.

4. The method of claim 1, wherein freezing of the ceramic article is carried out in a freeze dryer.

5. The method of claim 1, wherein the vacuum applied in step (b) is in the range of about 50 mtorr to about 500 mtorr.